

VOLKSWAGEN · POWERTRAIN

P1658

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1658 · Volkswagen

Data Bus Powertrain Range Performance From Distance Control

P1658 on Volkswagen vehicles means the engine control module (ECM) has detected an out-of-range performance message on the powertrain data bus coming from the distance control system, which is the radar-based cruise control and forward-collision module. The ECM expects regular, valid status frames from that module and flags this code when the data is missing, implausible, or outside the allowed range for too long.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Computer and output circuits

Symptoms you may notice

- The adaptive cruise control or distance control system stops working and a warning appears in the instrument cluster.
- A yellow or red forward-assist or cruise-control warning light stays on after startup.
- The car may default to conventional cruise control or refuse to set a speed at all.
- Intermittent operation of the distance control features, especially in wet or cold weather.
- Often no symptoms besides the warning light, with the car driving normally otherwise.
- Other driver-assist functions such as lane assist or emergency braking may be disabled at the same time.

Common causes, most likely first

- 1 A weak or failing battery or poor charging voltage causing the distance control module to drop off the data bus intermittently.
- 2 Corroded, loose, or water-damaged connectors at the distance control radar module or in the front bumper harness.
- 3 A faulty distance control radar module that is powered but not transmitting valid frames on the powertrain data bus.
- 4 CAN (controller area network) bus wiring faults such as chafed, pinched, or shorted twisted pairs between the radar module and the gateway.
- 5 A gateway or data bus interface issue that prevents messages from reaching the ECM even though the radar module is healthy.
- 6 Software or coding mismatch after a module replacement or battery disconnect that leaves the distance control module uncalibrated or misconfigured.
- 7 A failing ECM or radar module ground connection that causes intermittent communication loss under load or vibration.



How to diagnose and fix it

- 1 Scan all modules for stored codes and note whether the distance control module itself has communication or calibration faults before touching any hardware.
- 2 Test battery voltage and charging system output, then clear the code and road test to see whether low voltage is the trigger.
- 3 Inspect the radar module connectors and front bumper harness for corrosion, water intrusion, and loose pins, repairing or drying as needed.
- 4 Check the CAN bus wiring between the distance control module and the gateway for continuity, shorts to ground, and shorts to power.
- 5 Verify the distance control module is correctly coded and calibrated for the vehicle, performing a recalibration with a scan tool if required.
- 6 Substitute a known-good distance control module only after wiring and power checks pass, then recheck for P1658 and related communication codes.
- 7 Clear all codes, complete a road test at highway speed to let adaptive cruise control operate, and confirm the code does not return.

What the distance control bus code really means

- P1658 is a communication performance code, not a radar alignment code, so replacing the front radar sensor before checking power and bus wiring is a common and expensive misdiagnosis.
- A marginal battery that still starts the engine can cause this code because the distance control module may brown out during cranking and miss its startup handshake on the powertrain bus.
- Water ingress into the front bumper harness or the radar module connector is a frequent hidden cause on Volkswagens driven in wet or salted conditions, and the pins can look fine until the connector is opened.
- After a module replacement or a long battery disconnect, the distance control module may need coding and calibration before it will broadcast valid frames, so the code can be a configuration fault rather than a hardware failure.
- This code can be stored alongside generic U-codes for lost communication, and chasing only the U-codes without addressing the underlying power or bus fault will bring P1658 straight back.

Can I keep driving with P1658?

The car remains safe to drive because the fault affects driver-assist convenience features rather than engine or braking control, but adaptive cruise control and forward-collision warnings may be unavailable. Avoid relying on distance control functions and have the fault diagnosed soon, especially if the warning light is accompanied by other communication codes.



Tools that help

- Volkswagen-compatible scan tool with module coding and calibration capability
- Digital multimeter for voltage, continuity, and CAN bus resistance checks
- Wiring diagram and connector pinout for the distance control module and gateway
- Battery load tester and charging system tester
- Trim removal tools for accessing front bumper harness connectors

Reading P1658

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Volkswagen): its meaning depends on the make.

6 Computer and output circuits.

58 The exact fault within that area.

Often seen with

P0562 System Voltage Low · **U0100** Lost Communication With ECM/PCM A · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control · **U0155** Lost Communication With Body Control Module

See it working

Watch the animated explainer [How an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1658/>

